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NEWS 2
                "Ask CAS" for self-help around the clock
NEWS 3 SEP 09 ACD predicted properties enhanced in REGISTRY/ZREGISTRY
NEWS 4 OCT 03 MATHDI removed from STN
NEWS 5 OCT 04 CA/CAplus-Canadian Intellectual Property Office (CIPO) added
                to core patent offices
NEWS 6 OCT 13 New CAS Information Use Policies Effective October 17, 2005
NEWS 7 OCT 17
                STN(R) AnaVist(TM), Version 1.01, allows the export/download
                of CAplus documents for use in third-party analysis and
                visualization tools
NEWS 8 OCT 27
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NEWS
     9 OCT 27
                DIOGENES content streamlined
                EPFULL enhanced with additional content.
NEWS 10 OCT 27
NEWS 11 NOV 14
                CA/CAplus - Expanded coverage of German academic research
NEWS 12 NOV 30
                REGISTRY/ZREGISTRY on STN(R) enhanced with experimental
                spectral property data
NEWS 13 DEC 05
                CASREACT(R) - Over 10 million reactions available
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NEWS EXPRESS DECEMBER 02 CURRENT VERSION FOR WINDOWS IS V8.01,
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http://www.cas.org/ONLINE/UG/regprops.html

```
=> E "RLIP76"/CN 25
                      RLGS1930 PROTEIN (HUMAN CLONE DNA84920 GENE UNQ1930)/CN
E1
               1
E2
                     RLH 033/CN
               1
E3
               0 --> RLIP76/CN
                   RLIP76 PROTEIN (HUMAN)/CN
RLK PROTEIN TYROSINE KINASE/CN
RLK TYROSINE KINASE/CN
E4
               1
              1
E5
              1
E6
                     RLK5 RECEPTOR-LIKE PROTEIN KINASE/CN
E7
              1
E8
              1
                     RLL1 PROTEINS/CN
              1 RLLV1833 PROTEIN (HUMAN CLONE DNA92219 GENE UNQ1833)/CN
1 RLLV422 PROTEIN (HUMAN CLONE DNA44196 GENE UNQ422)/CN
1 RLM/CN
1 RLM 20/CN
1 RLM 20, POLYMER WITH 1.2-ETHANEDIOL AND
E9
E10
E11
E12
E13
               1
                     RLM 20, POLYMER WITH 1,2-ETHANEDIOL AND
2,6-NAPHTHALENEDICARBOXYLIC ACID, BLOCK/CN
              1
                      RLM 20, POLYMER WITH 1,4-BENZENEDICARBOXYLIC ACID AND
1,2-ETHANEDIOL, BLOCK/CN
E15
               1
                      RLM 20, POLYMER WITH 1,4-BENZENEDICARBOXYLIC ACID,
1,2-ETHANEDIOL AND 2,6-NAPHTHALENEDICARBOXYLIC ACID, BLOCK/CN
                      RLM 20, POLYMER WITH CARBONIC DICHLORIDE AND
               1
4,4'-(1-METHYLETHYLIDENE)BIS(PHENOL), BLOCK/CN
                    RLN3 PROTEIN (HUMAN CLONE DNA171372 GENE UNQ6188)/CN
E17
              1
E18
                     RLNI6974 PROTEIN (HUMAN CLONE DNA179765 GENE UNQ6974)/CN
                   RLO 6078/CN
RLOC PROTEIN (CAMPYLOBACTER JEJUNI RM1221 STRAIN RM1221)/CN
RLOG PROTEIN (CAMPYLOBACTER JEJUNI RM1221 STRAIN RM1221)/CN
E19
            1
E20
              1
E21
                    RLP 024/CN
E22
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E23
                  RLP 068/CN
E24
                  RLP 2078/CN
E25
                   RLP-1 (RAB-LIKE SMALL GTP-BINDING PROTEIN 1) (HUMAN CLONE
             1
PHC069)/CN
=> S E4
             1 "RLIP76 PROTEIN (HUMAN)"/CN
=> DIS L1 1 SQIDE
THE ESTIMATED COST FOR THIS REQUEST IS 6.15 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:N
REQUEST CANCELED
=> file caplus
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=> s l1
             6 L1
L2
=> d proteoliposome
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The following are valid formats:
ABS ----- GI and AB
ALL ----- BIB, AB, IND, RE
APPS ----- AI, PRAI
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BIB ------- AN, plus Bibliographic Data and PI table (default)

CAN ------ List of CA abstract numbers without answer numbers

CBIB ------ AN, plus Compressed Bibliographic Data

DALL ----- ALL, delimited (end of each field identified)

DMAX ----- MAX, delimited for post-processing

FAM ----- AN, PI and PRAI in table, plus Patent Family data

FBIB ----- AN, BIB, plus Patent FAM

IND ----- Indexing data

IPC ----- International Patent Classifications

MAX ----- ALL, plus Patent FAM, RE

PATS ----- PI, SO

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SAM ----- CC, SX, TI, ST, IT
SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
              SCAN must be entered on the same line as the DISPLAY,
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IMAX ----- MAX, indented with text labels
ISTD ----- STD, indented with text labels
OBIB ----- AN, plus Bibliographic Data (original)
OIBIB ----- OBIB, indented with text labels
SBIB ----- BIB, no citations
SIBIB ----- IBIB, no citations
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HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)
              containing hit terms
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HITSTR ----- HIT RN, its text modification, its CA index name, and
              its structure diagram
HITSEQ ----- HIT RN, its text modification, its CA index name, its
              structure diagram, plus NTE and SEQ fields
FHITSTR ---- First HIT RN, its text modification, its CA index name, and
              its structure diagram
FHITSEQ ---- First HIT RN, its text modification, its CA index name, its
             structure diagram, plus NTE and SEQ fields
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OCC ----- Number of occurrence of hit term and field in which it occurs
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to view a specified Accession Number.
ENTER DISPLAY FORMAT (BIB):end
=> s ?lipsome
L3
           42 ?LIPSOME
=> s ?liposome
        33727 ?LIPOSOME
T.4
=> s liposom?
        48589 LIPOSOM?
=> s 14 or 15
L6
         48775 L4 OR L5
=> s RLIP76 or RAlBP1 or (DNP-SG) or RIP1 or RLIP1
            56 RLIP76
            66 RALBP1
          7168 DNP
            89 DNPS
          7216 DNP
```

(DNP OR DNPS)

6155 SG 766 SGS 6779 SG (SG OR SGS) 107 DNP-SG (DNP(W)SG) 117 RIP1 2 RLIP1 L7 321 RLIP76 OR RALBP1 OR (DNP-SG) OR RIP1 OR RLIP1 => s 17 and 1610 L7 AND L6 r_8 => s 18 not py>2002 3312022 PY>2002 4 L8 NOT PY>2002 => d ibib 1-4 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN ACCESSION NUMBER: 2001:586352 CAPLUS DOCUMENT NUMBER: 135:300135 TITLE: Purification and functional reconstitution of intact ral-binding GTPase activating protein, RLIP76 , in artificial liposomes Singhal, Sharad S.; Singhal, Jyotsana; Cheng, JiZhong; AUTHOR(S): Pikula, Slawomir; Sharma, Rajendra; Zimniak, Piotr; Awasthi, Yogesh C.; Awasthi, Sanjay CORPORATE SOURCE: Department of Chemistry and Biochemistry, The University of Texas at Arlington, Arlington, TX, 76019-0065, USA SOURCE: Acta Biochimica Polonica (2001), 48(2), 551-562 CODEN: ABPLAF; ISSN: 0001-527X Polish Biochemical Society PUBLISHER: DOCUMENT TYPE: Journal LANGUAGE: English REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN 2000:257178 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 133:171724 TITLE: Glutathione-linked pathways in drug resistance. Characterization and functional reconstitution of human erythrocyte glutathione-conjugate transporter Awasthi, Y. C.; Singhal, S. S.; Zimniak, P.; Piper, J. AUTHOR(S): T.; Pikula, S.; Bandorowicz-Pikula, J.; Lin, J. T.; Srivastava, S. K.; Singh, S. V.; Awasthi, S. CORPORATE SOURCE: Department of Human Biological Chemistry and Genetics, Department of Internal Medicine, The University of Texas Medical Branch, Galveston, TX, 77555-1067, USA SOURCE: Clinical Chemistry and Enzymology Communications (2000), 8(4-6), 431-448CODEN: CCECEY; ISSN: 0892-2187 PUBLISHER: Harwood Academic Publishers Journal DOCUMENT TYPE: LANGUAGE: English REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1999:182219 CAPLUS

DOCUMENT NUMBER: 131:27425

TITLE: ATP-Dependent Colchicine Transport by Human

Erythrocyte Glutathione Conjugate Transporter

AUTHOR(S): Awasthi, Sanjay; Singhal, Sharad S.; Pandya, Utpal;

Gopal, Sanjiv; Zimniak, Piotr; Singh, Shivendra V.;

Awasthi, Yogesh C.

CORPORATE SOURCE: Department of Internal Medicine, The University of

Texas Medical Branch at Galveston, Galveston, TX,

77555-1067, USA

SOURCE: Toxicology and Applied Pharmacology (1999), 155(3),

215-226

CODEN: TXAPA9; ISSN: 0041-008X

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal LANGUAGE: English

REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 1998:249072 CAPLUS

DOCUMENT NUMBER: 129:51304

TITLE: ATP-dependent human erythrocyte glutathione-conjugate

transporter. II. functional reconstitution of

transport activity

AUTHOR(S): Awasthi, Sanjay; Singhal, Sharad S.; Pikula, Slawomir;

Piper, John T.; Srivastava, Sanjay K.; Torman, Robert T.; Bandorowicz-Pikula, Joanna; Lin, James T.; Singh,

Shivendra V.; Zimniak, Piotr; Awasthi, Yogesh C.

CORPORATE SOURCE: Departments of Internal Medicines, The University of

Texas Medical Branch, Galveston, TX, USA

SOURCE: Biochemistry (1998), 37(15), 5239-5248

CODEN: BICHAW; ISSN: 0006-2960

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ab 1

L9 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

AB We have recently shown that RLIP76, a ral-binding GTPase activating protein, mediates ATP-dependent transport of glutathione-conjugates (GS-E) and doxorubicin (DOX) (S. Awasthi et al., Biochem. 39, 9327, 2000). Transport function of RLIP76 was found to be intact despite considerable proteolytic fragmentation in prepns. used for those studies, suggesting either that the residual intact RLIP76 was responsible for transport activity, or that the transport activity could be reconstituted by fragments of RLIP76 If the former were true, intact RLIP76 would have a much higher specific activity for ATP-hydrolysis than the fragmented protein. We have addressed this question by comparing transport properties of recombinant RLIP76 and human erythrocyte membrane RLIP76 purified in buffers treated with either 100 or 500 μM serine protease inhibitor, PMSF. The purity and identity of recombinant and human erythrocyte RLIP76 was established by SDS/PAGE and Western-blot anal. These studies confirmed the origin of the 38 kDa protein, previously referred to as DNP-SG ATPase, from RLIP76. Higher PMSF concentration resulted in lower yield of the 38 kDa band and higher yield of intact RLIP76 from both human and recombinant source. In contrast, the substrate-stimulated ATPase activity in presence of DNP-SG, doxorubicin, daunorubicin, or colchicine were unaffected by increased PMSF; similarly, ATP-dependent

transport of doxorubicin in proteoliposomes reconstituted with RLIP76 was unaffected by higher PMSF. These results indicated

that limited proteolysis by serine proteases does not abrogate the transport function of RLIP76. Comparison of transport kinetics for daunorubicin between recombinant vs. human erythrocyte RLIP76 revealed higher specific activity of transport for tissue purified RLIP76, indicating that addnl. factors present in tissue purified RLIP76 can modulate its transport activity.

=> d ab 2

L9 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

The glutathione-conjugate transporter, S-(2,4-Dinitrophenyl) glutathione (AB DNP-SG) ATPase described by the authors previously was purified from human erythrocytes. DNP-SG ATPase showed a band at 38 kDa in SDS gels which was not recognized by the monoclonal antibodies against multidrug resistance associated protein (MRP). A saturable photoaffinity labeling of the 38 kDa band was observed with 8-azido ATP (Kd = $2 \mu M$). The transporter catalyzed ATP hydrolysis which was stimulated in the presence of glutathione-conjugate of 1-chloro-2,4-dinitro benzene (DNP-SG) as well as the cationic amphiphilic chemotherapeutic drug, doxorubicin (DOX). When reconstituted in artificial liposomes, DNP-SG ATPase mediated ATP-dependent, saturable transport of DOX (Km 2.4 μM, Vmax 194 nmol/min/mg) as well as DNP-SG (Km 36 μ M, Vmax 433 nmol/min/mg). The Km for ATP for both substrates was about 2.5 mM. Transport of DOX was competitively inhibited by ${\tt DNP-}$ SG and vice versa.

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The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/ http://www.nlm.nih.gov/pubs/techbull/nd04/nd04 mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s RLIP76 or RAlBP1 or (DNP-SG) or RIP1 or RLIP1

31 RLIP76

62 RALBP1

3965 DNP

46 DNPS

3989 DNP

```
(DNP OR DNPS)
          2746 SG
           464 SGS
          3117 SG
                 (SG OR SGS)
            93 DNP-SG
                 (DNP(W)SG)
            61 RIP1
             1 RLIP1
L10
           200 RLIP76 OR RALBP1 OR (DNP-SG) OR RIP1 OR RLIP1
=> s ?liposome
          8620 ?LIPOSOME
L11
=> s ?liposom?
         31490 ?LIPOSOM?
=> s 112 and 110
            16 L12 AND L10
L13
=> s 113 not py>2002
       1725411 PY>2002
L14
             8 L13 NOT PY>2002
=> s 114 not py>2001
       2267130 PY>2001
L15
             5 L14 NOT PY>2001
=> d ibib 1-5
                       MEDLINE on STN
L15 ANSWER 1 OF 5
ACCESSION NUMBER:
                    2001686403
                                   MEDLINE
DOCUMENT NUMBER:
                    PubMed ID: 11732624
TITLE:
                    Purification and functional reconstitution of intact
                    ral-binding Gtpase activating protein, RLIP76, in
                    artificial liposomes.
AUTHOR:
                    Singhal S S; Singhal J; Cheng J; Pikula S; Sharma R;
                    Zimniak P; Awasthi Y C; Awasthi S
CORPORATE SOURCE:
                    Department of Chemistry and Biochemistry, The University of
                    Texas at Arlington, 76019-0065, USA.
CONTRACT NUMBER:
                    CA77495 (NCI)
     GM32304 (NIGMS)
                    Acta biochimica Polonica, (2001) 48 (2) 551-62.
SOURCE:
                    Journal code: 14520300R. ISSN: 0001-527X.
PUB. COUNTRY:
                    Poland
DOCUMENT TYPE:
                    Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:
                    English
                    Priority Journals
FILE SEGMENT:
                    200205
ENTRY MONTH:
                    Entered STN: 20011205
ENTRY DATE:
                    Last Updated on STN: 20020529
                    Entered Medline: 20020528
L15 ANSWER 2 OF 5
                       MEDLINE on STN
                    2001354912
ACCESSION NUMBER:
                                   MEDLINE
DOCUMENT NUMBER:
                    PubMed ID: 11300797
TITLE:
                    Functional reassembly of ATP-dependent xenobiotic transport
                    by the N- and C-terminal domains of RLIP76 and
                    identification of ATP binding sequences.
AUTHOR:
                    Awasthi S; Cheng J Z; Singhal S S; Pandya U; Sharma R;
                    Singh S V; Zimniak P; Awasthi Y C
CORPORATE SOURCE:
                    Department of Chemistry and Biochemistry, The University of
                    Texas at Arlington, 76019-0065, USA.. sawasthi@uta.edu
```

CONTRACT NUMBER:

CA 77495 (NCI)

ES09140 (NIEHS) GM 32304 (NIGMS)

SOURCE: Biochemistry, (2001 Apr 3) 40 (13) 4159-68.

Journal code: 0370623. ISSN: 0006-2960.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200106

ENTRY DATE: Entered STN: 20010625

Last Updated on STN: 20010625 Entered Medline: 20010621

L15 ANSWER 3 OF 5 MEDLINE on STN ACCESSION NUMBER: 2000417526 MEDLINE DOCUMENT NUMBER: PubMed ID: 10924126

TITLE: Novel function of human RLIP76: ATP-dependent

transport of glutathione conjugates and doxorubicin.
Awasthi S; Cheng J; Singhal S S; Saini M K; Pandya U;
Pikula S; Bandorowicz-Pikula J; Singh S V; Zimniak P;

Awasthi Y C

CORPORATE SOURCE: Department of Chemistry and Biochemistry, The University of

Texas at Arlington, 76019-0065, USA.. sawasthi@uta.edu

CONTRACT NUMBER: CA 55589 (NCI)

CA 77495 (NCI)
GM 32304 (NIGMS)

AUTHOR:

SOURCE: Biochemistry, (2000 Aug 8) 39 (31) 9327-34.

Journal code: 0370623. ISSN: 0006-2960.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200009

ENTRY DATE: Entered STN: 20000915

Last Updated on STN: 20000922 Entered Medline: 20000907

L15 ANSWER 4 OF 5 MEDLINE on STN ACCESSION NUMBER: 1999180685 MEDLINE DOCUMENT NUMBER: PubMed ID: 10079207

TITLE: ATP-Dependent colchicine transport by human erythrocyte

glutathione conjugate transporter.

AUTHOR: Awasthi S; Singhal S S; Pandya U; Gopal S; Zimniak P; Singh

S V; Awasthi Y C

CORPORATE SOURCE: Department of Internal Medicine, The University of Texas

Medical Branch at Galveston, Galveston, Texas, 77555-1067,

USA.. sawasthi@utmb.edu

CONTRACT NUMBER: CA-77495 (NCI)

ES-09140 (NIEHS) GM-32304 (NIGMS)

SOURCE: Toxicology and applied pharmacology, (1999 Mar 15) 155 (3)

215-26.

Journal code: 0416575. ISSN: 0041-008X.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199904

ENTRY DATE: Entered STN: 19990426

Last Updated on STN: 19990426 Entered Medline: 19990415

L15 ANSWER 5 OF 5 MEDLINE on STN ACCESSION NUMBER: 1998215649 MEDLINE

DOCUMENT NUMBER: PubMed ID: 9548755

TITLE: ATP-Dependent human erythrocyte glutathione-conjugate

transporter. II. Functional reconstitution of transport

activity.

AUTHOR: Awasthi S; Singhal S S; Pikula S; Piper J T; Srivastava S

K; Torman R T; Bandorowicz-Pikula J; Lin J T; Singh S V;

Zimniak P; Awasthi Y C

CORPORATE SOURCE: Department of Internal Medicine, The University of Texas

Medical Branch, Galveston, Texas, USA.. sawasthi@utmb.edu

CONTRACT NUMBER: CA55589 (NCI)

CA63660 (NCI) GM32304 (NIGMS)

SOURCE: Biochemistry, (1998 Apr 14) 37 (15) 5239-48.

Journal code: 0370623. ISSN: 0006-2960.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199805

ENTRY DATE: Entered STN: 19980520

Last Updated on STN: 19980520 Entered Medline: 19980514

=> d his

(FILE 'HOME' ENTERED AT 14:45:38 ON 05 DEC 2005)

FILE 'REGISTRY' ENTERED AT 14:46:00 ON 05 DEC 2005

E "RLIP76"/CN 25

L1 1 S E4

FILE 'CAPLUS' ENTERED AT 14:46:43 ON 05 DEC 2005

L2 6 S L1

L3 42 S ?LIPSOME

L4 33727 S ?LIPOSOME

L5 48589 S LIPOSOM?

L6 48775 S L4 OR L5

L7 321 S RLIP76 OR RALBP1 OR (DNP-SG) OR RIP1 OR RLIP1

L8 10 S L7 AND L6

L9 4 S L8 NOT PY>2002

FILE 'MEDLINE' ENTERED AT 14:51:24 ON 05 DEC 2005

L10 200 S RLIP76 OR RALBP1 OR (DNP-SG) OR RIP1 OR RLIP1

L11 8620 S ?LIPOSOME

L12 31490 S ?LIPOSOM?

L13 16 S L12 AND L10

L14 8 S L13 NOT PY>2002

L15 5 S L14 NOT PY>2001

=> s 114 not 115

L16 3 L14 NOT L15

=> d ibib 1-3

L16 ANSWER 1 OF 3 MEDLINE on STN

ACCESSION NUMBER: 2003084700 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12422239

TITLE: Functional reconstitution of Ral-binding GTPase activating

protein, RLIP76, in proteoliposomes

catalyzing ATP-dependent transport of glutathione conjugate

of 4-hydroxynonenal.

AUTHOR: Sharma Rajendra; Sharma Abha; Yang Yusong; Awasthi Sanjay;

Singhal Sharad S; Zimniak Piotr; Awasthi Yogesh C

CORPORATE SOURCE: Department of Human Biological Chemistry and Genetics,

University of Texas Medical Branch, Galveston, TX

77555-0647, USA.

CONTRACT NUMBER: CA 77495 (NCI)

GM32304 (NIGMS)

Acta biochimica Polonica, (2002) 49 (3) 693-701. SOURCE:

Journal code: 14520300R. ISSN: 0001-527X.

PUB. COUNTRY: Poland

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200309

ENTRY DATE: Entered STN: 20030225

> Last Updated on STN: 20030906 Entered Medline: 20030905

L16 ANSWER 2 OF 3 MEDLINE on STN 2003035514 ACCESSION NUMBER: MEDITNE DOCUMENT NUMBER: PubMed ID: 12545192

Transport functions and physiological significance of 76 TITLE:

kDa Ral-binding GTPase activating protein (RLIP76

AUTHOR: Awasthi Sanjay; Sharma Rajendra; Yang Yusong; Singhal

Sharad S; Pikula Slawomir; Bandorowicz-Pikula Joanna; Singh

Shivendra V; Zimniak Piotr; Awasthi Yogesh C

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of

Texas at Arlington, Arlington, TX, USA.

CONTRACT NUMBER: CA 55589 (NCI)

> CA 77495 (NCI) GM 32304 (NIGMS)

SOURCE: Acta biochimica Polonica, (2002) 49 (4) 855-67. Ref: 65

Journal code: 14520300R. ISSN: 0001-527X.

PUB. COUNTRY: Poland

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200401

ENTRY DATE: Entered STN: 20030125

Last Updated on STN: 20040106 Entered Medline: 20040105

L16 ANSWER 3 OF 3 MEDLINE on STN ACCESSION NUMBER: 2002673242 MEDLINE DOCUMENT NUMBER: PubMed ID: 12433796

TITLE: RLIP76, a novel transporter catalyzing ATP-dependent efflux of xenobiotics.

Awasthi Sanjay; Sharma Rajendra; Singhal Sharad S; Zimniak AUTHOR:

Piotr; Awasthi Yogesh C

CORPORATE SOURCE: Department of Chemistry and Biochemistry, University of

Texas at Arlington, Arlington, Texas.

CONTRACT NUMBER: CA 77495 (NCI)

GM32304 (NIGMS)

SOURCE: Drug metabolism and disposition: biological fate of

chemicals, (2002 Dec) 30 (12) 1300-10. Ref: 60

Journal code: 9421550. ISSN: 0090-9556.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

General Review; (REVIEW)

(REVIEW, TUTORIAL)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200305 ENTRY DATE: Entered STN: 20021116

Last Updated on STN: 20030514 Entered Medline: 20030513

=> d ab 1

L16 ANSWER 1 OF 3 MEDLINE on STN

Earlier studies from our laboratories have shown that RLIP76, a previously described Ral-binding GTPase activating protein (Jullien-Flores et al., 1995, J. Biol. Chemical 270: 22473), is identical with the xenobiotic transporter DNP-SG ATPase, and can catalyze ATP-dependent transport of glutathione-conjugates as well as doxorubin (Awasthi et al., 2000, Biochemistry, 39: 9327). We have now reconstituted purified bacterially expressed RLIP76 in proteoliposomes , and have studied ATP-dependent uptake of the glutathione conjugate of 4-hydroxynonenal (GS-HNE) by these vesicles. Results of these studies show that RLIP76 reconstituted in proteoliposomes catalyzes ATP-dependent transport of GS-HNE against a concentration gradient. The transport of GS-HNE is saturable with respect to ATP as well as GS-HNE with K(m) values of 1.4mM and 2.5 microM, respectively. These studies demonstrate that RLIP76 mediates active transport of GS-HNE, and are consistent with our previous work showing that RLIP76-mediated efflux of GS-HNE regulates the intracellular concentration of 4-HNE and thereby affects 4-HNE mediated signaling.

=> file pctfull COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 2.93 38.17 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE 0.00 -1.46

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56 RIP1

```
1 RLIP1
L17
            94 RLIP76 OR RALBP1 OR (DNP-SG) OR RIP1 OR RLIP1
\Rightarrow s 117/ab
             0 RLIP76/AB
             0 RALBP1/AB
            17 DNP/AB
           173 SG/AB
            10 SGS/AB
           181 SG/AB
                 ((SG OR SGS)/AB)
             0 DNP-SG/AB
                 ((DNP(W)SG)/AB)
             0 RIP1/AB
             0 RLIP1/AB
             0 (RLIP76/AB OR RALBP1/AB OR (DNP-SG/AB) OR RIP1/AB OR RLIP1/AB)
L18
=> s 117/clm
             1 RLIP76/CLM
             1 RALBP1/CLM
           168 DNP/CLM
          2780 SG/CLM
             1 DNP-SG/CLM
                 ((DNP(W)SG)/CLM)
             2 RIP1/CLM
             0 RLIP1/CLM
L19
             5 (RLIP76/CLM OR RALBP1/CLM OR (DNP-SG/CLM) OR RIP1/CLM OR RLIP1/C
=> ?liposom?
?LIPOSOM? IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
=> s ?liposom?
L20
         40497 ?LIPOSOM?
\Rightarrow s 120/clm
LEFT TRUNCATION IGNORED FOR '?LIPOSOM?' FOR FILE 'PCTFULL'
          4950 (LIPOSOM?/CLM)
Left truncation is not valid in the specified search field in the
specified file. The term has been searched without left truncation.
Examples: '?TERPEN?' would be searched as 'TERPEN?' and '?FLAVONOID'
would be searched as 'FLAVONOID.'
If you are searching in a field that uses implied proximity, and you
used a truncation symbol after a punctuation mark, the system may
interpret the truncation symbol as being at the beginning of a term.
Implied proximity is used in search fields indexed as single words,
for example, the Basic Index.
=> s 121 and 119
L22
            0 L21 AND L19
=> s proteoliposom?
           430 PROTEOLIPOSOM?
=> s 123 and 119
L24
             0 L23 AND L19
=> s 117 and 124
L25
             0 L17 AND L24
```

---Logging off of STN---

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CA SUBSCRIBER PRICE	ENTRY O.00	SESSION -1.46

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